FIL'KIN, N.G., inzh.

Repairing rotors of suction dredges. Transp. stroi. 15 no.5:55 My '65.
(MIRA 18:7)

1. Trest Transgidromekhanizatsiya.

S/035/62/000/006/053/064
A001/A101

AUTHOR: Fil'kin, V. A.

TITLE: Recent tectonic movements and geomorphological peculiarities of the
              Chelyabinsk-Kurgan repeated leveling traverse

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 6, 1962, 27,
              abstract 6G175 (Collection "Sovrem. tekton. dvizheniya zem. kory i
              metody ikh izuch.", Moscow, AN SSSR, 1961, 114 - 118)

TEXT: The results of the repeated leveling along the Chelyabinsk-Kurgan
270-km long line (the first leveling was performed in 1941 - 1942 and the repeated
one in 1953 - 1954) are compared with geomorphological materials collected as
a result of studying the valleys of rivers Miass, Iset', Tobol, Yurgamysh and
largest depressions of lakes.

                                                           V. S.

[Abstracter's note: Complete translation]

Card 1/1

FIL'KIN, V.A.

Practice in using the cartographic method for the study of the
tectonic foundation of the drainage system using the Donets
Basin as an example. Izv. AN SSSR. Ser. geog. no.2:127-134
Mr-Ap '65.   (MIRA 18:4)

1. Institut geografii AN SSSR.

FIL'KIN, Vasiliy Ivanovich

[Chechen-Ingush party organization during the years of the
Great Patriotic War of the Soviet Union] Checheno-ingushskaia
partiinaia organizatsiia v gody Velikoi Otechestvennoi voiny
Sovetskogo Soiuza. Groznyi, Checheno-ingushskoe knizhnoe izd-vo,
1960. 145 p.   (MIRA 14:4)
  (Chechen-Ingush A.S.S.R.--World War, 1939-1945--Economic aspects)

ZINGER, Ye.M.; FIL'KIN, V.A.

Lake Baskunchak needs protection. Priroda 53 no.2:88-93
'64.   (MIRA 17:2)

1. Institut geografii AN SSSR, Moskva.

MESHCHERYAKOV, Yu.A.; FIL'KIN, V.A.

Evaluation of geomorphological indicators given in points of a scale as a method of the quantitative characteristics of recent tectonic movements. Izv. AN SSSR Ser. geog. no.1:98-106 Ja-F '65.

(MIRA 18:2)

1. Institut geografii AN SSSR.

FIL'KIN, V. P

25(2); 16(0)   PHASE I BOOK EXPLOITATION   SOV/2594

Akademiya nauk SSSR. Institut mashinovedeniya. Seminar po tochnosti v
mashinostroyenii i priborostroyenii

Trudy, vyp. 8 (Transactions of the Institute of Mechanical Engineering,
Academy of Sciences, USSR. Seminar on Accuracy in Machinery and Instrument
Design; No. 8) Moscow, Izd-vo AN SSSR, 1955. 78 p. 1,800 copies printed.

Ed. of Publishing House: V.V. Pobedimskiy; Tech. Ed.: Ye.V. Makuni;
Editorial Board: N.G. Bruyevich, Academician (Resp. Ed.); G.G. Baranov,
Doctor of Technical Sciences; M.L. Bykhovskiy, Candidate of Technical
Sciences; A.P. Vladziyevskiy, Candidate of Technical Sciences, I.Ye.
Gorodetskiy, Doctor of Technical Sciences; and A.S. Shatalov, Doctor of
Technical Sciences.

PURPOSE: The collection of papers is intended for scientific research workers,
engineers, and designers.

COVERAGE: This collection of articles deals with the following topics: an
application of the principle of virtual displacements in kinematics, accumula-

Card 1/4

Transactions (Cont.)   SOV/2594

tion of errors in gear trains, design of a wire-rope drive, interpretation of functions with many variables by using adding, multiplying, and simplest functional units, form inspection of circular parts, and design of gyroscopic verticals for accuracy. No personalities are mentioned. References follow several of the articles.

TABLE OF CONTENTS:

Card 2/4

Transactions (Cont.)   SOV/2594

The article explains the possible ways in which the accumulation of errors of the single gears in a gear train can occur. Simple formulas which can be used as criteria are presented.

Sergeyev, V.I. Design of a Wire Rope Transmission for Accuracy   26
Specific features of design for accuracy are discussed, and formulas for calculating errors for a single transmission and for a number of transmissions of the same design are presented. The effect of thermal expansion is also discussed.

Pinsker, I.Sh. Presentation of Functions of Many Variables by Using Adding Multiplying, and the Simplest Functional Devices   35
The author presents a number of methods for expanding a given function into different combinations of functions with one or one and two variables. The methods are applicable to cases in which the given functions have two and three variables. Adders, multipliers, and simple functional devices are used.

Fil'kin, V.P. Problem of Inspection for Roundness of Parts of Circular Cross Section   52

Card 3/4

Transactions (Cont.)

SOV/2594

This article discusses checking geometrical errors in round parts by the two- and three-point method with different angles of contact.

Sergeyev, V.I. Some Problems in Designing Gyroscopic Verticals for Accuracy   64
The effect of moments to which a gyroscopic vertical is subject and which affect its characteristics are discussed. Formulas derived permit the calcu- lation of mathematical expectations and the range of angles of precession for gyroscopic verticals with linear correction, as well as free ones.

AVAILABLE: Library of Congress

Card 4/4

GO/jb
12-19-59

FILKIN, V.P.

123-1-736

Translation from: Referativnyy Zhurnal, Mashinostroyeniye, 1957, Nr 1, p.110 (USSR)

AUTHORS: Baranov, G. G., Rubin, S. B., Fil'kin, V. P.

TITLE: On the Theory of Through Centerless Grinding
(K teorii skvoznogo bestsentrovogo shlifovaniya)

PERIODICAL: Sbornik: Tochnost' izgotovleniya sharikovykh i rolikovykh podshipnikov na avtomat. liniyakh. Moscow, AN SSSR, 1955, pp. 19-59

ABSTRACT: The authors analyse the shape of the regulating wheel providing maximum accuracy of the machined pieces, and the slippage of single points of the workpiece in relation to the regulating wheel during the through grinding. Because the work resting between the wheels is cone-shaped, the regulating wheel must have the shape of an enveloping surface of the cone family and not of a body (as previously assumed) of a tangent cylinder, which axis crosses the axis of this rotating body. In order to obtain maximum similarity of shape of the regulating wheel in relation to the profile desired in the work, the diamond point

Card 1/2

On the Theory of Through Centerless Grinding (Cont.)

attachment is turned in the vertical plane an additional
angular amount (a turning device to shape the wheel to
a hyperboloid-in-rotation profile is used on the subject
machines). The magnitude of this angle is computed. The
variability of the diameter of the regulating wheel (in
terms of its length) creates variable speeds of the longi-
tudinal travel of the work, which increase as the work
travels thru the machine. This fact produces a play between
the ground rings fed simultaneously between the wheels.
This disruption increases with the angle at which the
regulating wheel is set. In order to obtain a compact
stock of workpieces, supports of ground rings are built
up on one or both ends. Forces acting on the ground rings
are examined, and the required resistance of the support
is calculated. This force depends upon the condition of
the face of the regulating and grinding wheel. A dull
grinding wheel increases and a dull regulating wheel
decreases the forces acting on the ring support.

Card 2/2

FIL'KIN, V.P.

Checking the shape of circular workpieces.   Trudy Inst.mash.Sem.po
toch.v mash.i prib. no.8:52-63 '55.   (MLRA 10:9)
                    (Machine-shop practice)

FIL'KIN, V.P.

Calculating the moment of friction for disk friction couplings considering the slipping. Trudy Inst. mash. Sem. po toch. v mash. i prib. no.11:41-61 '57.   (MIRA 10:12)

(Couplings)   (Friction)

FILKIN, V F

28(2)   p·y   PHASE I BOOK EXPLOITATION   SOV/1394

Akademiya nauk SSSR.   Institut mashinovedeniya

Voprosy sinteza i tochnosti slozhnykh ustroystv nepreryvnogo
   deystviya (Synthesis and Accuracy of Complex Mechanisms
   for Continuous Operation) Moscow, Izd-vo AN SSSR, 1958.   226 p.
   3,500 copies printed.

Resp. Ed.: Bruyevich, N.G., Academician; Ed. of Publishing House:
   Ioffe, D.M.;   Tech. Ed.: Golubeva, V.

PURPOSE: The book is intended for scientific research workers
   and engineers concerned with computers.

COVERAGE: This book is a collection of articles divided into two
   parts.   The three articles of the first part deal with the
   synthesis and accuracy of complex mechanisms for computers,
   functional investigation, inputs and outputs, methods of
   synthesis in solving implicit functions and accuracy of the
   process of manufacturing parts.   The second part of the book

Card 1/4

Synthesis and Accuracy (Cont.)   SOV/1394

contains seven articles dealing with the accuracy of some
particularly simple mechanisms: cans, gears, etc., and
their design for accuracy. The articles are based on ex-
perimental material which shows that the theoretical premises
and conclusions were confirmed by practical tests. The book
is based on scientific work carried out by the authors in
1955-56. The authors thank the following for reviewing the
book: N.Ye. Kobrinskiy, N.I.Pchel'nikov, and A.A. Fel'dbaum,
Professors and Doctors of Technical Sciences; B.G. Dostupcv,
Docent, Doctor of Technical Sciences; T.A. Golinkevich,
A.I. Ivantsov, Yu.V. Lubatov, and I.F. Seregin, Docents,
Candidates of Technical Sciences; B.M. Tseytlin, Candidate of
Technical Sciences. The author also thanks Professor, Doctor
of Technical Sciences G.G. Baranov for assistance on problems
of simple mechanisms, and N.P. Ivannikov for working on the
second part of the book. There are 87 references, all Soviet.

TABLE OF CONTENTS:

                                                            3

Foreword

Card 2/4

Synthesis and Accuracy   (Cont.)   SOV/1394

PART I.   PROBLEMS OF SYNTHESIS AND ACCURACY
OF COMPLEX MECHANISMS FOR CONTINUOUS OPERATION

PART II.   ACCURACY OF SOME STANDARD COMPUTER MECHANISMS

Card 3/4

Synthesis and Accuracy (Cont.)   SOV/1394

AVAILABLE: Library of Congress

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                                        5-11-59

Card 4/4

FILIKIN, U.P.

25(2)   C.4   PHASE I   BOOK EXPLOITATION   SOV/2565

Akademiya nauk SSSR. Institut mashinovedeniya. Seminar po tochnosti
    v mashinostroyenii i priborostroyenii

Trudy, vyp. 12 (Transactions of the Institute of Mechanical
    Engineering, USSR Academy of Sciences. Seminar on Accuracy in
    Machine and Instrument Building, Nr 12) Moscow, Izd-vo AN SSSR,
    1959. 70 p. Errata slip inserted. 2,500 copies printed.

Ed. of Publishing House: M.M. Dobshits; Tech. Ed.: N.F. Yegorova;
    Editorial Board: N.G. Bruyevich, Academician (Resp. Ed.);
    G.G. Baranov, Doctor of Technical Sciences; M.L. Bykhovskiy,
    Doctor of Technical Sciences; A.P. Vladziyevskiy, Doctor of
    Technical Sciences; and A.S. Shatalov, Doctor of Technical
    Sciences.

PURPOSE: This book is intended for engineers concerned with accuracy
    in machines and instruments.

COVERAGE: This is a collection of scientific papers dealing with the

Card 1/5

Transactions (Cont.)   SOV/2565

accuracy and adjustment of various devices. The subjects discussed
include calculating the accuracy of bearing subassemblies in
precision mechanisms constructed in the form of shafts assembled
on two radial bearings, calculating accuracy in computing devices
with two degrees of freedom, design and adjustment of pneumatic
gages, synchronizing the rotation of driving and driven shafts
in universal joint drives, analysis of the process of forming
parts by centerless grinding, and the effect of self-oscillations
on the accuracy of computing devices such as resistance bridge-
circuits with automatic drive for multiplying two scalar quan-
tities.

TABLE OF CONTENTS:

Card 2/ 5

Transactions (Cont.)   SOV/2565

, instruments and discusses methods of adjustment for improving
the accuracy of mechanisms. There are no references.

Lyubatov, Yu.V. On Calculating the Accuracy of Computing Mechanisms
With Two Degrees of Freedom   13
    The author discusses some problems concerning the effect of ad-
    justment of computing mechanisms with two degrees of freedom on
    the accuracy of a computing device. He describes methods of
    establishing the origin of coordinate systems for driving links
    of such mechanisms and gives mathematical expressions for the
    errors of the output of a mechanism. There are 3 references, all
    Soviet.

Balakshin, O.B. On the Problem of Calculating the Range of Linearity
and Sensitivity in Pneumatic Gages   24
    The author discusses the design and adjustment of pneumatic gages
    which work on the principle of measuring the clearance between
    the gaging head and the surface of the measured part. Using
    a specific example, he demonstrates a graphical method of

Card 3/5

Transactions (Cont.)   SOV/2565

. calculating various parameters of a gage.   There are 2 references,
both Soviet.

Matevosyan, P.A.   On a Method of Reducing the Error in Movement of
the Driven Link of a Universal Joint Drive   29
The author discusses causes of asynchronous rotation of the
driving and driven shafts in universal joint drives. He describes
methods for reducing error in transmitting the rotation from the
driving to the driven shaft due to errors in manufacture of the
drive parts and due to nonparallelism between the driving and
driven shafts.   There are 5 references, all Soviet.

Fil'kin, V.P.   Analyzing the Forming Process of Parts by Centerless
Grinding   36
The author presents an analytical investigation of the process of
forming parts by centerless grinding. He derives formulas for
calculating errors in the part shape and formulas for calcula-
ting the parameters of the grinder setup. There are 7 references:
4 Soviet, 2 German, and 1 English.

Card 4/5

Transactions (Cont.)   SOV/2565

Sergeyev, V.I. Effect of Self-Oscillations on the Accuracy of
Bridge-type Computing Devices
     The author presents a method for calculating the amplitude of   58
  self-oscillations taking place in a computing device having an
  automatic drive with nonlinear elements, such as a resistance
  bridge-circuit with an automatic drive for multiplying two
  scaler values.

AVAILABLE: Library of Congress

Card 5/5   GO/jb
                                                        11-30-59

BARANOV, G.G. (Moskva); KOCHENOV, M.I. (Moskva); FIL'KIN, V.P. (Moskva)

Investigation of the precision of an automatically controlled grinding process. Izv. AN SSSR. Otd. tekh. nauk Energ. i avtom. no.6:162-171 N-D '59.   (MIRA 13:8)
          (Grinding and polishing) (Automatic control)

FIL'KIN, V.P.

Analyzing the shaping of parts subjected to centerless grinding.
Trudy Inst. mash. Sem. po toch. v mash. i prib. no.12:36-57 '59.
(MIRA 12:6)

(Grinding and polishing)

AUTHORS: Baranov, G. G., Kochenov, M. I., and Fil'kin, V. P. (Moscow)

TITLE: Investigation of the Accuracy of the Automatic Grinding Process

ABSTRACT: Presented at the III All-Union Joint Conference on Automation of Production Processes in Engineering and the Automation of Electric Drive in Industry.
A historical review is given of work on automatic grinding in the Soviet Union. An experimental investigation is then described into the automatic centreless grinding of the external ring of a bearing of diameter 135 mm using the machine 01S22. Eq (1) is a relation established between the deviations in the sizes before and after grinding; Δd_k is the limiting deviation of the ring after grinding from the mean of the group, Δd is the limiting deviation before grinding, and the mean value of the product kc was established experimentally as 2. With $\Delta d = \pm 30$ microns, Eq (1) gives $\Delta d_k = \pm 10$ microns.

Card 1/4

S/024/59/000/06/020/028
E081/E241

Investigation of the Accuracy of the Automatic Grinding Process

In the experiments eleven groups of 500 rings were produced
and in each group 40 rings at the beginning and 40 groups
at the end were rejected. Each group consisted initially
either of rings of a single diameter $(\pm 5\mu)$ or of
rings of two slightly different diameters (each $\pm 5\mu$).
After grinding, the maximum and minimum diameters of each
ring were measured. For all groups the distribution of
the deviations Δd_o (maximum and minimum combined)
and $\Delta d_{\emptyset}$ (difference between maximum and minimum) were ✓
found. If Δd_c is the deviation of the mean diameter,
Δd_o includes Δd_c and the "form" error $\Delta d_{\emptyset}$. The
results are summarised in the Table (p 166); σ is the
mean square deviation of the quantity defined by the
suffix, $\langle$ the range of scatter (see Fig 2), and Δ_k
the systematic change of size of the rings during the time
of working of each group. Fig 1 shows part of the results
for maximum and minimum diameter of the processed rings
of Group III, and Fig 2 shows the distribution curves (a)
of size and (b) of errors of shape. Curve 1 is empirical,
curve 2(a) is a Gaussian distribution and curve 2(b) a

Card 2/4

S/024/59/000/06/020/028
E081/E241

Investigation of the Accuracy of the Automatic Grinding Process

Maxwell distribution. Fig 4 shows the dependence of $\triangle_k$ σ_0, σ_c and $\sigma_{\emptyset}$ on the number of rings in the step.

[This figure refers to groups I, II and III in which the initial diameter of the rings had two values differing by 50μ. In group I the lrrge diameters (d = 135. 100 mm) and small diameters (d = 135. 050) alternated in ones. In group II the large and small rings were distributed in lots of 7 rings, and in group III the lots contained 21 rings.] Fig 5 shows the dependence of $\triangle_k$, σ_0, σ_c and $\sigma_{\emptyset}$ on the step height. $\triangle_k$ is about 9 to 10 μ for step heights 25, 50, 75 μ, and for h = 0 it is 23μ. This cannot be explained in terms of the increase in the mean surplus (pripusk) $\sqcap_{p_c}$ from 88 to 100μ (groups V and IV, table p 166). Fig 6 shows that the size of the removed surplus has only a small effect on σ_0 and σ_c, but appreciably influences the value of $\sigma_{\emptyset}$. The change in $\triangle_k$ in Fig 6 also suggests that the size of the removed surplus also influences the wear and blunting of the grinding circle. Fig 6 refers to stepped lots of rings; Fig 7 is similar, but refers to rings of uniform size.

Card 3/4 The rings in Group XI were selected at random from the

S/024/59/000/06/020/028
E081/E241

Investigation of the Accuracy of the Automatic Grinding Process

other groups and had diameters of 135. 100 mm ± 0.03.
Fig 8 shows the measured mean diameter after preliminary
grinding (top) and after final grinding. The calculated
parameters for this group are in the last line of the
table and are in all instances smaller than the grand
mean values in the line above. On the basis of the results,
a provisional discussion is given of the possibility of
applying automation to the grinding process, for example
by basing the control on the change in diameter between
alternate rings, or on the arithmetic mean of a group of
rings. Other possibilities include the use of two machines
working successively, or the automatic sorting of rings
into different size groups. There are 8 figures and
1 table.

SUBMITTED: April 7, 1959

Card 4/4

PHASE I BOOK EXPLOITATION   SOV/5291

Soveshchaniye po kompleksnoy mekhanizatsii i avtomatizatsii tekhno-
logicheskikh protsessov v mashinostroyenii. 2d, Moscow, 1956

Avtomatizatsiya mashinostroitel'nykh protsessov, t. III: Obrabotka
rezaniyem i obshchiye voprosy avtomatizatsii (Automation of Ma-
chine-Building Processes. v. 3: Metal Cutting and General Auto-
mation Problems) Moscow, Izd-vo AN SSSR, 1960. 296 p. (Series:
Its: Trudy, t. 3) 4,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya.
Komissiya po tekhnologii mashinostroyeniya.

Resp. Ed.: V. I. Dikushin, Academician; Ed. of Publishing House:
V. A. Lobov; Tech. Ed.: S. G. Markovich.

PURPOSE: This collection of articles is intended for technical
personnel concerned with the automation of the machine industry.

COVERAGE: This is Volume III of the transactions of the Second
Conference on the Full Mechanization and Automation of Manufac-
turing Processes in the Machine Industry, held September 25-29,
1956. The transactions have been published in three volumes.
Volume I deals with the hot pressworking of metals, and volume
II, with the actuation and control of machines. The present
volume deals with the automation of metal machining and work-
hardening, and with general problems encountered in automa-
tion. The transactions on the automation of metal-machining
processes were published under the supervision of P. S. Demi-
yanok and A. M. Karatygin, and those on the automation of work
hardening processes, under the supervision of E. A. Satel', and
M. O. Yakobson. No personalities are mentioned. There are no
references.

Ershova, Yu. B. On the Operation of the Tools in Automatic
Production Lines   32

Lyudmirsky, D. G. Experience of the SKB-6 (Special Design
Office No. 6) in Designing and Mastering Automatic Produc-
tion-Line Operations   43

Yegorov, B. V. Automation of Universal Metal-Cutting Machines
for Mass Production   53

Netlyudov, G. I. Automatic Machining of Parts Used in
Watchmaking   62

L 43886-66   EWT(1)   GW

ACC NR: AT6011146   SOURCE CODE: UR/3197/65/000/002/0199/0208

AUTHOR: Fil'kin, V. A.

ORG: Institute of Geography, AN SSSR (Institut geografii AN SSSR)

TITLE: Relationship of contemporary exogenic processes and movements of the earth's crust at the Baskunchak polygon [test area]

SOURCE: AN EstSSR. Institut fiziki i astronomii. Sovremennyye dvizheniya zemnoy kory. Recent crustal movements, no. 2, 1965, 199-208

TOPIC TAGS: epeirogeny, crustal deformation, repeated leveling, geophysical polygon, geomorphology / Caspian Sea

ABSTRACT: Results are presented for a series of studies of crustal deformation carried out at two geophysical polygons (test area) located in the salt-dome structures of the Caspian Sea area. The basic data consisted principally of repeated high-precision levelings dating from 1951 when the two test areas (Baskunchak and Saykhin) were established. The second leveling was run in 1958, and these lines were repeated in 1961 and 1963 (Baskunchak polygon). Geomorphological and geological studies carried out in the later periods were combined with the leveling

Card   1/2

L 43886-66

ACC NR: AT6011146

data to identify the types, locations and rates of movement of the princi-
pal local tectonic zones. Orig. art. has: 2 figures.   [ER]

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 003

Card 2/2 mjs

BORODICH, V.D.; GOLUB', A.P.; KOMBAROV, A.K.; KREMELEV, M.G.; MOROZ, N.K.;
SAMOYLOV, B.N.; FIL'KIN, V.Ya.

Critical currents of Nb-Zr alloys in an external magnetic
field. Zhur. eksp. i teor. fiz. 44 no.1:110-115 Ja '63.
(MIRA 16:5)
(Niobium-Zirconium alloys—Electric properties)
(Magnetic fields)

Reel # 131
Filin, B.I.